

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 31

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte SABURO HAYASHI, SUMIO OINUMA, TAKAFUMI YAMAMOTO,
KAZUTOSHI SOUMIYA, HIROYASU KATO

Appeal No. 1996-1581
Application 08/149,815

HEARD: January 12, 2000

Before KIMLIN, GARRIS and PAK, Administrative Patent Judges.

KIMLIN, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1 and 4-10, all the claims remaining in the present application. Claim 1 is illustrative:

1. A charging roll comprising:

a center shaft;

a foam layer formed on an outer circumferential surface of said center shaft, said foam layer consisting of an electrically conductive foam body or a foam body a part of which is made electrically conductive;

an electrically conductive elastic layer formed on an outer surface of said foam layer, said electrically conductive elastic layer having a thickness of 100Fm-1200Fm, and comprising one of an electrically conductive rubber composition and an electrically conductive thermoplastic elastomer;

a resistance adjusting layer formed by coating on an outer surface of said electrically conductive elastic layer; and

a protective layer formed by coating on an outer surface of said resistance adjusting layer.

The examiner relies upon the following references as evidence of obviousness:

Hosaka et al. (Hosaka)	5,168,313	Dec. 01, 1992
Ohta et al. (Ohta)	5,312,662	May 17, 1994

Appellants' claimed invention is directed to a charging roll that finds utility in electrophotographic copying machines and the like. The charging roll comprises an electrically conductive elastic layer formed on the outer surface of an electrically conductive foam layer, a resistance adjusting layer formed on the outer surface of the elastic layer and a protective layer. The elastic layer is made up of either a rubber

composition or a thermoplastic elastomer and has a thickness in the range of 100 - 1200Fm. According to appellants, they "have discovered that a thickness of the elastic layer less than 100Fm does not sufficiently cover and eliminate cell defects in the foam body" (page 3 of principal brief), whereas "a thickness of the conductive elastic layer greater than 1200Fm does not sufficiently reduce noise generated during use of the claimed charging roll." (page 4 of principal brief).

Appealed claims 1, 4-8 and 10 stand rejected under 35 U.S.C. § 103 as being unpatentable over Hosaka in view of Ohta. Also, claim 9 stands rejected under 35 § U.S.C. 103 over the same combination of references.

We have thoroughly reviewed the respective positions of appellants and the examiner. As a result of such review we will not sustain the examiner's rejections.

Hosaka discloses a charging roll that comprises appellants' foam layer and resistance adjusting layer but does not comprise the presently claimed electrically conductive elastic layer and protective layer. In particular, Hosaka teaches that the conductive layer is either a resin such as polyester or thin metallic sheets. To remedy this deficiency of Hosaka, the examiner relies upon Ohta. The charging roll of Ohta does not comprise the foam layer of appellants and Hosaka but does comprise an electrically conductive elastic layer. According to the examiner, it would have been

obvious for one of ordinary skill in the art to substitute the elastic layer of Ohta for the conductive layer of Hosaka and arrive at the claimed thickness by optimization.

Appellants do not contest the examiner's finding that it would have been obvious for one of ordinary skill in the art to provide a protective layer on the charging roll of Hosaka. However, assuming it would have also been obvious for one of ordinary skill in the art to substitute an electrically conductive elastic layer for the conductive layer of Hosaka, appellants rely upon specification data as evidence of unexpected results. According to appellants, the comparative data found in the present specification establishes unexpected results for employing an electrically conductive elastic layer in the claimed thickness range of 100-1200Fm. Specifically, appellants invite attention to Comparative Example 1 and Examples 1-4 in the specification which demonstrate that a thickness greater than 1200Fm produces "a charging roll which generates an unacceptable level of noise, 75 db", whereas Comparative Example 2 and Examples 5-6 show that a thickness less than 100Fm "results in creases or recesses along the outer surface of the charging roll, as indicated by the surface roughness Rz of 7.2Fm, and by the variation in printed images represented by the "a" in Table 2." (page 4 of principal brief."

In the face of appellants' showing of unexpected results, the examiner responds "Appellant has not provided any unexpected results that occur due to the claimed thicknesses, but has only offered general allegations of reduced cell defects and noise reduction." (page 9 of answer). When appellants pointed out in their reply brief that their principal brief argued the significance and unexpected nature of the comparative specification data,¹ the examiner merely responded that the reply brief "has been entered and considered but no further response by the Examiner is deemed necessary." (paper no. 23).

Manifestly, it is incumbent upon the examiner to offer a critical analysis of evidence of non-obviousness presented by appellants. See In re Margolis 785 F.2d 1029, 1031, 228 USPQ 940, 942 (Fed. Cir. 1986) and Pines v. McAllister 188 F.2d 388, 390, 89 USPQ 312, 314 (CCPA 1951). In the present case, the examiner's failure to critically assess the probative value of appellants' specification data constitutes reversible error.

¹ See page 3 of the reply brief.

Appeal No. 1996-1581
Application No. 08/149,815

In conclusion, based on the foregoing, the examiner's decision rejecting the
appealed claims is reversed.

Reversed

EDWARD C. KIMLIN)	
Administrative Patent Judge)	
)	
)	
BRADLEY R. GARRIS)	BOARD OF PATENT
Administrative Patent Judge)	APPEALS AND
)	INTERFERENCES
)	
)	
CHUNG K. PAK)	
Administrative Patent Judge)	

vsh

Appeal No. 1996-1581
Application No. 08/149,815

Parkhurst, Wendel & Rossi
1421 Prince Street
Suite 210
Alexandria, VA 22314